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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/386,339	08/31/1999	HIROSHI KATSURABAYASHI	104122	1316

25944 7590 02/19/2003

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EXAMINER

SHAFFER, ERIC T

ART UNIT	PAPER NUMBER
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3623

DATE MAILED: 02/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/386,339

Applicant(s)

KATSURABAYASHI ET AL.

Examiner

Eric T. Shaffer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1 – 27 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. **Claims 1 – 13, 15 - 20, 22, and 24 - 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Brooks et al US 5,825,869).

Claims 1, 5 and 25 are an optimum operator selection support system and computer readable medium which provides determination standards for selecting optimum operators of a job, comprising:

a document management part that manages documents related to jobs, with additional information on operators who generated the documents; Documents related to operators and their jobs is anticipated by Brooks et al, which discloses “the adjunct routing server stores the first data in the form of resumes. An agent resume is a formal listing of the skills that an agent possesses. The resume includes both the level of ability achieved in each skill, i.e. the rating with respect to a call-handling capability of the agent, and the levels of the call-management preferences of the agent” (column 5, line 32 - 36). Said documents are managed by “a

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ResumeCode field that can be used as an identifier of the agent when the agents table is queried to look up the skills of the particular agent” (column 9, lines 35 - 37).

a document feature extraction part that extracts a plurality of documents generated by one operator from said document management part, and extracts features of the respective documents; Documents that are generated by calls and reflect or relate to an operator's performance is anticipated by Brooks et al, which discloses “a match analysis report summarizes all calls received by skill expression and shows the abandon rate per skill expression, which skill expressions are being requested most often, and the level of service provided for each skill expression” (column 6, line 38 - 41).

a job feature extraction part that extracts features of jobs of said operator by detecting common features of the plurality of documents extracted by said document feature extraction part. Detecting common features of a job by an operator is anticipated by Brooks et al, which discloses “the "closeness" of a match is determined by comparing a number that is assigned to indicate the desired level of expertise regarding a call-handling need of a particular call with a number that is assigned to indicate the level of expertise possessed by the agent with regard to handling calls having the particular need. Since each skill expression identifies more than one call-handling need, the score for a call will depend upon more than one comparison of such numbers” (column 6, line 46 - 54).

4. **Claims 2 and 26** are the optimum operator selection support system and computer-readable recording medium, further comprising:

a task management part that analyzes job order relations based on electronic data

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transmitted/received among operators, and manages information on the job order relations. Analysis of the call or job order is anticipated by Brooks et al, which discloses “each call is associated with a skill expression that identifies the skills that are relevant to effective handling of the call” (column 5, line 40 - 42).

wherein said job feature extraction part extracts the features of the jobs and roles of said operator based on the features of documents extracted by said document feature extraction part and the information on the job order relations managed by said task management part. Using extraction of features from resume documents is anticipated by Brooks et al, which discloses “the resume-details table is generated at step 62. This table details the identifier of each skill in order to reference back to the skills table and details the agents ResumeCode to reference back to the agents table. In addition, the resume-details table contains skill levels, skill preferences and excluded flags. A skill level is the level of knowledge or expertise that a particular agent has achieved in a given skill.” (column 9, line 37 - 44).

5. **Claim 3, 4, 6, 7 and 27** are for an optimum operator selection support system and computer-readable medium, further comprising:

a conversation management part that manages conversations among the operators by utilizing electronic data; Managing the assignment of calls to operators is anticipated by Brooks et al, which discloses “A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged

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with identification of abilities that are advantageous to efficiently processing the calls.” (column 4, line 51 - 57).

a conversation feature extraction part that extracts features of the conversations among the operators managed by said conversation management part. Extracting or gathering information from telephone conversations is anticipated by Brooks et al, which discloses “Additional information may be gathered by means of interactive voice response (IVR) input and database lookups. For example, customer database retrieval allows call-management to determine a customer history and customer preferences.” (column 5, line 50 - 54).

wherein said job feature extraction part extracts the features of the jobs of said operator from the features of the documents extracted by said document feature extraction part and distribution of the conversations extracted by said conversation management part, and extracts the roles of said operator from the information on the job order relations managed by said task management part. Extracting features from job documents is anticipated by Brooks et al, which discloses “a skill summary report organizes the data by skill expressions, rather than by agents” (column 6, lines 33 - 34).

6. **Claims 8, 9, 15 and 20** are an optimum operator selection support system according to claim 1, further comprising a similar job search part that searches for similar jobs based on information extracted by said job feature extraction part. Searching for a specific type of similar jobs or skill expression that use the same skill set is anticipated by Brooks et al, which discloses “This report may list the number of calls enqueued for selected skill expressions and the average time spent on those calls for selected agents during specific time periods. A match analysis report summarizes all calls received by skill expression and shows the abandon rate per skill

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expression, which skill expressions are being requested most often, and the level of service provided for each skill expression.” (column 6, lines 39 - 42).

7. **Claims 10 and 11** are an optimum operator selection support system according to claim 1, further comprising a job structure generation part that generates a structure representing roles of operators related to a job. Generating a list structure of roles or skill expressions that make up the job of an operator is anticipated by Brooks et al, which discloses “A skill summary report organizes the data by skill expressions, rather than by agents.” (column 6, lines 33 - 34).

8. **Claim 12** is the optimum operator selection support system according to claim 1, further comprising an optimum operator selection part that selects optimum members based on information extracted by said job feature extraction part. Finding the person with the best optimal set of relevant skills to perform a job is anticipated by Brooks et al, which discloses “Each call is associated with a skill expression that identifies the skills that are relevant to efficient handling of the call. As previously noted, the preferred embodiment is one in which more than one relevant skill is identified, so that all of the factors that determine a "best" agent for handling a call can be considered.” (column 5, lines 42 - 44).

9. **Claim 13** is the optimum operator selection support system according to claim 1, further comprising:

an inquiry part that makes an inquiry to said job feature extraction part; Making an inquiry in order to find one specific type of job skill or feature is anticipated by Brooks et al, which discloses “a ResumeCode field that can be used as an identifier of the agent when the agents table is queried to look up the skills of the particular agent” (column 9, lines 35 - 37).

a display information analysis part that analyzes response information to inquiry information by said inquiry part, and generates image information having a content to be easily understood. An easily understood score that provides information to an inquiry is anticipated by Brooks et al, which discloses “A "skill score" is indicative of the correlation between the attributes of the agents and the desired abilities for handling a particular call. That is, in this embodiment the skill score is a numeric measure of how well a particular agent's resume matches the skill expression associated with the call.” (column 11, lines 9 - 14).

10. **Claims 16 – 19** are an optimum operator selection support system according to claim 1, further comprising a key-person search part that detects an operator who played a leading role in a job handled by a plurality of operators, and extracts documents based on the similar role. Identifying a leader with the best or highest score in a specific skill is anticipated by Brooks et al, which discloses “this skill commonality may be considered as creating a "team." For example, a team may be formed by designating a skill as "sales" and assigning a skill level from 1 to 9, with an agent having a skill level of 1 being considered a novice and an agent who has achieved a skill level of 9 being considered a team leader.” (column 9, lines 19 - 23).

11. **Claim 22** is the optimum operator selection support system according to claim 4, further comprising a mail quotation detection and deletion part that deletes a quotation from another operator's remark, from conversation information managed by said conversation management part. Detection and deletion of a quotation is anticipated by Brooks et al, which discloses “The

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transaction dispatcher also causes the queue controller 50 to delete the corresponding entry in the transaction queue 56" (column 8, lines 63 - 65).

12. **Claim 24** is the optimum operator selection support system according to claim 4, further comprising an important member detection part that detects a person who is not registered by said conversation management part as a member to conduct a job but significantly related to the job for execution of the job. Detecting a person who is excluded from or not registered to do a specific job is anticipated by Brooks et al, which discloses "Excluded flags may be identified in the resume-details table to denote whether or not a particular skill is an "excluded skill" for a particular agent. Excluded skills are skills in the agent's resume that the agent is not permitted to handle under any circumstances." (column 9, line 66 – column 10, line 3).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 14, 21 and 23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks et al (US 5,825,869) as applied to the claims above, in view of Machin et al (US 6,038,544).

Brooks et al teaches a call management system and method that screens incoming telephone calls and then assigns incoming calls to operators. The device inputs, stores and

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searches a database of operator resumes in order to match an operator with an incoming call.

The device can manage documents, extract data from documents, assign skill score level scores and store voice data. The invention does not specifically teach generating graphs, recording voice conversations or allowing operators to input comments.

Machin et al teaches an operator performance evaluation system and method that rates and ranks operators. The device also plots performance data on a graph, allows operators to input additional information as remarks, and also receives and records input conversation voice data in a digital format.

It would be obvious to enhance the Brooks et al call management device with the Machin et al device that evaluates operator performance because evaluating skills is a logical step in determining which skills an operator possesses and determining in which subject matter the operator possesses a relevant body of knowledge. By determining where an operator's strengths lie, the device would enable the call management center to make the highest and best use of the operators skill set by assigning the operator to calls that most effectively use his skill set.

15. **Claim 14** is the optimum operator selection support system according to claim 13, wherein said display information analysis part generates the image information as a graph representing documents and features of the documents handled by an arbitrary operator, among documents generated in a job conducted by a plurality of operators. Information presented in the form of a graph is anticipated by Machin et al, which discloses in Figure 5 that "FIG. 5 illustrates a score screen 300 that graphically displays the performance of the user in a variety of categories" (column 5, lines 37 - 38).

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It would be obvious to one of ordinary skill in the art at the time the invention was made to enhance the Brooks et al device by adding a graph onto which the performance data of multiple operators could be plotted because such an invention would allow comparison of many operators with respect to various skill sets in order to see which operator has the best skill set in a given subject matter,

16. **Claim 21** is the optimum operator selection support system according to claim 4, wherein said conversation management part further includes a conversation information input part that inputs conversation information which has not been automatically obtained by said conversation management part, wherein said conversation management part handles the conversation information inputted by said conversation information input part as information similarly to collected conversation information. Input or recording of telephone conversations in a digitized sound file is taught by Machin et al, which recites "Memory 14 stores responses 52 as text and presents responses 52 on output module 26 to the user. In addition, memory 14 may store a version of responses 52 as digitized sound files, so that the user can listen to the response to assess non-textual information in order to make a proper selection." (column 4, line 26 - 31).

It would be obvious to one of ordinary skill in the art at the time the invention was made to enhance the Brooks et al device by allowing the call center to record the voice of a caller and operator interacting because this would allow a supervisor to monitor the call for quality assurance and review the actual call at a later date. It would allow the supervisor to play the call back to the operator in order to provide examples of sub-standard performance and enhance the ability to provide specific criticisms, advice and corrective action to the operator.

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17. **Claim 23** is the optimum operator selection support system according to claim 4, wherein said conversation feature extraction part separately extracts features of a quotation from another operator's remark and a newly-written remark. Operator's entering remarks is taught by Machin et al, which recites "the user selects an appropriate response, enters caller information, enters comments or notes concerning call 18, or provides other information to respond to call" (column 3, lines 47 - 48).

It would be obvious to one of ordinary skill in the art at the time the invention was made to enhance the Brooks et al device by allowing the operator to add comments or remarks as a point of future reference and to provide a caller history that would enable another operator to have an instant body of knowledge of the case surrounding the call.

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Conclusion

18. No claims were allowed and all claims were rejected.
19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Retallick et al. (US 6,442,567) – Device to assign persons to tasks
Dietz et al. (US 6,408,337) – Device to hire and assign non-employee workers to tasks
Foster et al. (US 6,356,632) – Call center management device
Puram et al. (US 6,289,340) – Consultant task assignment device
Mitsuoka et al. (US 6,466,914) – Job assignment device
Walker et al. (US 5,884,270) – Employee assignment device
Doyle et al. (US 6,424,709) – Use of skills to route calls to operators
Gabriel (US 6,434,230) – Rule based device for routing calls to employees
Flockhart et al. (US 5,754,639) – Queueing and assigning calls to employees
Kohler et al. (US 5,206,903) – Matching skills with calls device
McFarlane et al. (US 6,453,038) – Database system for call center management

20. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Shaffer whose telephone number is (703) 305-5283. The Examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington D.C. 20231

Or faxed to:

(703) 746-7238	[After Final communications, labeled "Box AF"]
(703) 746-7239	[Official communications]
(703) 706-9124	[Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 2, 2121 Crystal Drive, Arlington, VA, 4th floor receptionist.

ETS
February 3, 2003


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